Utilities Program Area Overview

Description:

Utilities Program Area projects provide for the planning, study, design and construction of water and wastewater projects. Water projects provide adequate and safe production, transmission and storage for water consumption and fire suppression. Wastewater projects (also referred to as sewer projects) address adequate and safe conveyance of wastewater to the DC Water owned and operated Blue Plains Advanced Wastewater Treatment Plant (Blue Plains) via the Washington Suburban Sanitary Commission (WSSC) and DC Water collection systems. These projects provide critical, well-maintained, reliable and sustainable water and wastewater infrastructure. Furthermore, these projects provide increasing capacity of both systems to support master plan development, in addition to meeting or exceeding stringent Federal and State mandates for water quality and human health. Water projects are funded from the Water Fund and wastewater projects are funded from the Sewer Fund.

Goal:

Water Fund projects maintain the water distribution system and the Water Treatment Plant (WTP) to accommodate existing and planned development in an efficient, economical and environmentally sound manner. Sewer Fund projects provide and maintain adequate sewage conveyance facilities to accommodate existing and planned development in an efficient, economical and environmentally sound manner. Additionally, the Sewer Fund provides for adequate wastewater treatment at the Blue Plains that complies with environmental regulations. The ultimate goal of both the Water Fund and Sewer Fund projects is to protect human health.

Objectives:

- Provide clean, safe and reliable water service that complies with Environmental Protection Agency (EPA) and Maryland Department of the Environment (MDE) regulations, such as the Disinfectants and Disinfection By-Products Rule (Stage 2 DBP Rule). Compliance strategy projects include changing coagulation and advanced treatment at the WTP, replacing old tuberculated cast iron pipes in the water distribution system, improving water quality and circulation within two water tanks and taking the Talbott Water Tank out of service.
- Increase fire flow capacity in the distribution system and modify the Talbot Tank/Twinbrook pressure zone.
- Improve the reliability of the water system by reducing the number of breaks in the water pipes and by assessing key water system components.
- Increase production capacity at the WTP, as needed, to meet Master Plan development projections.
- Improve the reliability and integrity of the wastewater collection system by renewing the physical infrastructure. Safely and environmentally convey wastewater by preventing sewage blockages and overflows. Reduce infiltration and inflow (I/I) of rain and groundwater into the sewage system minimizing the negative impacts to the environment and public health.

Project Status:

The following projects have been closed. These projects do not appear in the FY 2013 - 2017 CIP:

- Pump Station Upgrade (220-850-4C34)
- Sewer Rehab - Cabin John (220-850-4A45)
- Sewer Rehab - Watts Branch (220-850-7B45)
- Water Plant - ARRA Grant (210-850-8A84)

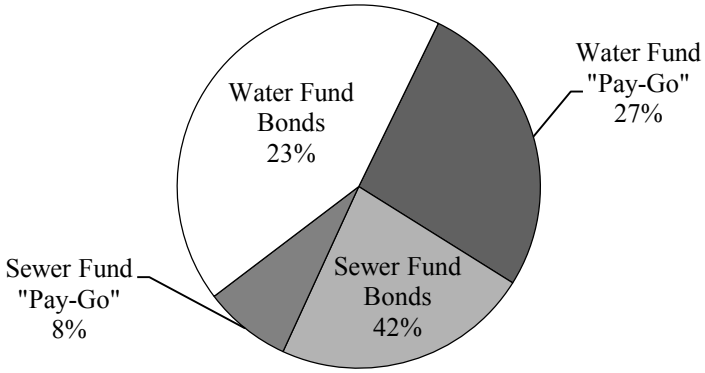
TABLE U-1. Appropriation Schedule

	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Blue Plains Wastewater Treatment	13,080,000	6,414,000	5,242,000	3,018,000	3,657,000	3,258,000	on-going	34,669,000
Hydraulic Surge Suppression	847,500	-	-	-	-	-	-	847,500
SCADA Improvements	440,000	200,000	270,000	-	-	-	-	910,000
Sewer Rehabilitation	5,001,150	1,179,000	1,143,000	1,365,000	1,241,000	1,250,000	on-going	11,179,150
Southlawn Lane Water Main	682,000	-	-	-	-	-	-	682,000
Water Main Rehabilitation	14,667,085	4,399,000	3,344,685	2,450,370	2,523,881	2,599,598	on-going	29,984,619
Water Plant Upgrades	4,140,500	-	-	-	-	-	-	4,140,500
Water System Facility Improvements	1,229,000	1,260,000	-	-	-	-	-	2,489,000
Water Tank Improvements	740,888	1,621,000	148,000	3,100,000	-	-	-	5,609,888
Total	40,828,123	15,073,000	10,147,685	9,933,370	7,421,881	7,107,598	on-going	90,511,657

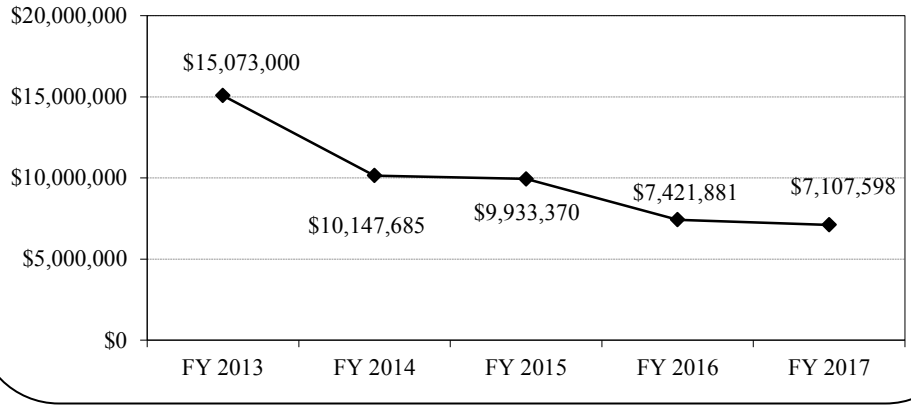
TABLE U-2. Funding Schedule

	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	5,202,673	4,020,500	2,085,343	1,225,185	1,261,941	1,299,799	on-going	15,095,440
Bond Proceeds (Water)	17,282,800	3,459,500	1,672,343	4,325,185	1,261,941	1,299,799	-	29,301,567
Developer (Water)	121,500	-	-	-	-	-	-	121,500
Sewer Fund	5,230,112	1,179,000	1,148,000	1,365,000	1,241,000	1,250,000	on-going	11,413,112
Bond Proceeds (Sewer)	12,087,500	6,414,000	5,242,000	3,018,000	3,657,000	3,258,000	on-going	33,676,500
Federal Grant (Sewer)	903,538	-	-	-	-	-	-	903,538
Total	40,828,123	15,073,000	10,147,685	9,933,370	7,421,881	7,107,598	on-going	90,511,657

GRAPH U-1. FY 2013 New Funding of $15,073,000



GRAPH U-2. FY 2013 - FY 2017 New Funding Schedule



FY 2013 Utilities Appropriation Summary

TABLE U-3. Total FY 2013 Appropriations

	Capital Projects	Water	Sewer	SWM	Refuse	Speed	Current Total
Prior Year Appropriations	-	22,606,973	18,221,150	-	-	-	40,828,123
Less Expended as of 05/01/12	-	(16,488,119)	(10,898,162)	-	-	-	(27,386,281)
Prior Year Funds Carried Over	-	6,118,854	7,322,988	-	-	-	13,441,842
Add New Appropriations	-	7,480,000	7,593,000	-	-	-	15,073,000
Total	-	13,598,854	14,915,988	-	-	-	28,514,842

TABLE U-4. FY 2013 Appropriations by Project

	Capital Projects	Water	Sewer	SWM	Refuse	Speed	Current Total
Blue Plains Wastewater Treatment	-	-	11,731,295	-	-	-	11,731,295
Hydraulic Surge Suppression	-	348,940	-	-	-	-	348,940
SCADA Improvements	-	299,731	117,981	-	-	-	417,712
Sewer Rehabilitation	-	-	3,066,712	-	-	-	3,066,712
Southlawn Lane Water Main	-	215,174	-	-	-	-	215,174
Water Main Rehabilitation	-	5,581,611	-	-	-	-	5,581,611
Water Plant Upgrades	-	2,683,351	-	-	-	-	2,683,351
Water System Facility Improvements	-	2,476,211	-	-	-	-	2,476,211
Water Tank Improvements	-	1,993,836	-	-	-	-	1,993,836
Total	-	13,598,854	14,915,988	-	-	-	28,514,842

TABLE U-5. Water Fund Operating Cost Impact

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
SCADA Improvements	10,000	5,000	-	-	-	-
Southlawn Lane Water Main	-	500	-	-	-	-
Water Plant Upgrades	-	15,000	-	-	-	-
Water System Facility Improvements	-	120,000	-	-	-	-
Water Tank Improvements	-	5,000	-	-	-	-
Total	10,000	145,500	-	-	-	-

TABLE U-6. Sewer Fund Unfunded Schedule

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Sewer Rehabilitation	250,000	-	-	-	-	-
Total	250,000	-	-	-	-	-

Project Name:	Blue Plains Wastewater Treatment
Project Number:	220-850-1A45
Program Area:	Utilities

Prior Appropriations:	13,080,000
Add New Appropriations:	6,414,000
Add Future Appropriations:	15,175,000
Current Project Total:	34,669,000
Add Unfunded:	-
Current Project Total with Unfunded:	34,669,000

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	13,080,000
Less Expended:	7,762,705
Prior Year Funds Carried Over:	5,317,295
Add New Appropriations:	6,414,000
Total FY 2013 Appropriations:	11,731,295
Percent Expended:	22%

Project Snapshot

Original Project Total w/Unfunded:	N/A
Current Project Total w/Unfunded:	34,669,000
Percent Change:	N/A
Percent Completed:	N/A
Est. Completion Year:	On-going

Description: This project funds the City's cost-share to enhance the wastewater treatment at the DC Water Blue Plains Advanced Wastewater Treatment Plant (Blue Plains). The City is allocated 9.31 million gallons per day (mgd) capacity of wastewater treatment. The City cost-share is for WSSC projects which either support system improvements or environmental regulations at Blue Plains. The FY 2013 spending peak is due to the design and construction of two large initiatives by DC Water: Biosolids Management and Enhanced Nutrient Removal (ENR). The Biosolids Management project will limit the solids produced at the plant and recapture energy from the digestion process. ENR will be implemented to meet new environmental regulations mandated by an EPA-issued consent decree and a National Pollutant Discharge Elimination System (NPDES) permit.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Construction	13,080,000	6,414,000	5,242,000	3,018,000	3,657,000	3,258,000	on-going	34,669,000
Total	13,080,000	6,414,000	5,242,000	3,018,000	3,657,000	3,258,000	on-going	34,669,000

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Sewer Fund	3,000,000	-	-	-	-	-	-	3,000,000
Bond Proceeds (Sewer)	10,080,000	6,414,000	5,242,000	3,018,000	3,657,000	3,258,000	on-going	31,669,000
Total	13,080,000	6,414,000	5,242,000	3,018,000	3,657,000	3,258,000	on-going	34,669,000

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Sewer Fund	-	-	-	-	-	-

Explanation of impact: This project will have no measurable impact on the operating budget.

Schedule: WSSC has six CIP projects, which fund many DC Water CIP projects. FY 2013 through FY 2017 — The six active WSSC projects are: S-22.06 - Liquid Train Projects; S-22.07 - Biosolids Management; S-22.08 - Biological Nutrient Removal; S-22.09 - Plant-wide Projects; S-22.10 - Enhanced Nutrient Removal (ENR); and S-22.11 - Pipelines & Appurtenances. Future Years — Projects to be determined.

Status: Implementation. This project first appeared in the FY 2011 CIP. Note: These numbers reflect the City's 5.5 percent cost-share of WSSC total costs provided in the WSSC Proposed FY 2013 Budget as adjusted after reconciliation with actual spending through FY 2011. The WSSC share is approximately 46 percent of the Blue Plains' costs in accordance with the 1985 Inter-Municipal Agreement, except project S-22.11, which is primarily based on WSSC sewage flow through the DC Water sewer mains. The ENR project in the Proposed FY 2013 WSSC Budget is partially funded by the Maryland Chesapeake Bay Restoration Fund that City utility customers contribute towards.

Coordination: WSSC Capital Improvements Program; DC Water Capital Improvements Program.

Staff contact: Department of Public Works. Jim Woods, Civil Engineer II, 240-314-8521.

Project Name: Hydraulic Surge Suppression
Project Number: 210-850-9C34
Program Area: Utilities

Prior Appropriations:	847,500
Add New Appropriations:	-
Add Future Appropriations:	-
Current Project Total:	847,500
Add Unfunded:	-
Current Project Total with Unfunded:	847,500

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	847,500
Less Expended:	498,560
Prior Year Funds Carried Over:	348,940
Add New Appropriations:	-
Total FY 2013 Appropriations:	348,940
Percent Expended:	59%

Project Snapshot

Original Project Total w/Unfunded:	907,500
Current Project Total w/Unfunded:	847,500
Percent Change:	-7%
Percent Completed:	90%
Est. Completion Year:	FY 2013

Description: This project funds the construction and inspection of a surge suppression system, which is necessary to protect the City's 24-inch water transmission main. Improvements include the installation of hydropneumatic surge tanks at the Water Treatment Plant and the Glen Mill Pump Station and installation of a pressure monitoring system at select locations. The surge tanks work in concert with the new air release valves installed in FY 2011. The need for hydraulic surge suppression was identified during the construction of the Glen Mill Pump Station and confirmed by the rupture of the 24-inch transmission main in July 2010. The surge tank at Glen Mill Pump Station will be installed underground to avoid visual impact on the adjacent residential community. Noise mitigation for the Glen Mill Pump Station will be installed to address noise impacts on adjacent properties.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	82,500	-	-	-	-	-	-	82,500
Construction	765,000	-	-	-	-	-	-	765,000
Total	847,500	-	-	-	-	-	-	847,500

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	847,500	-	-	-	-	-	-	847,500
Total	847,500	-	-	-	-	-	-	847,500

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	-	-	-	-	-	-

Explanation of impact: The completion of this project added $10,000 to the FY 2012 operating budget to fund equipment maintenance.

Schedule: Prior years work to be completed — Construct surge suppression and noise mitigation equipment at the Glen Mill Pump Station; install a pressure monitoring system at select locations.

Status: Construction. Construction completion is planned for Summer 2012. This project first appeared in the FY 2009 CIP. Note: The design of the surge suppression and noise mitigation upgrades was provided, at no cost to the City, by the design consultant for the Glen Mill Pump Station.

Coordination: Neighborhood Civic Associations and Adjacent Landowners; Maryland Department of the Environment; Water System Facility Improvements project (210-850-1C34); Water Plant Upgrades project (210-850-4A40); SCADA Improvements project (210/220-850-9D34).

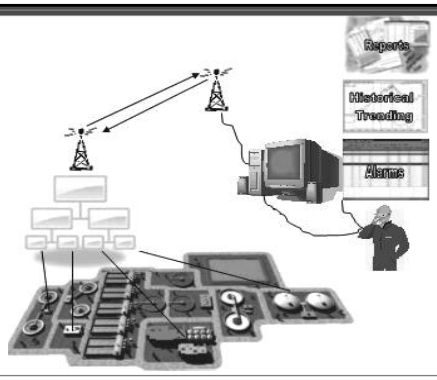
Staff Contact: Department of Public Works. Dan Kane, Civil Engineer II, 240-314-8523.

Project Name: SCADA Improvements
Project Number: 210/220-850-9D34
Program Area: Utilities

Prior Appropriations:	440,000
Add New Appropriations:	200,000
Add Future Appropriations:	270,000
Current Project Total:	910,000
Add Unfunded:	-
Current Project Total with Unfunded:	910,000

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	440,000
Less Expended:	222,288
Prior Year Funds Carried Over:	217,712
Add New Appropriations:	200,000
Total FY 2013 Appropriations:	417,712
Percent Expended:	24%



Project Snapshot

Original Project Total w/Unfunded:	300,000
Current Project Total w/Unfunded:	910,000
Percent Change:	203%
Percent Completed:	50%
Est. Completion Year:	FY 2015

Description: This project funds the analysis, design and construction of improvements to the City System Control and Data Acquisition (SCADA) system. SCADA refers to a system that collects data from various sensors at the Water Treatment Plant, the water distribution system and the sanitary sewer collection system and then sends this data to a central location to manage and control the systems. The following proposed improvements are based on the *2011 SCADA System Evaluation Report* and to enhance overall system reliability, improve water loss audit accuracy and increase security capabilities. Priority 1 – communication equipment upgrades for the Water Treatment Plant and the distribution facilities, Shady Grove and Piccard pressure reducing valves (PRV) integration and signal and control improvements at Glen Mill Pumping Station, North Horners and Fallsgrove sanitary sewer pumping station and the water tanks; Priority 2 – water quality monitoring and site security system integration; Priority 3 – remaining PRV integration and miscellaneous improvements. As the existing fiber network in the City and County matures and expands, water and sewer facilities may be connected to the fiber network to further improve communication reliability.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	100,000	-	-	-	-	-	-	100,000
Construction	340,000	200,000	270,000	-	-	-	-	810,000
Total	440,000	200,000	270,000	-	-	-	-	910,000

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	300,000	200,000	265,000	-	-	-	-	765,000
Sewer Fund	140,000	-	5,000	-	-	-	-	145,000
Total	440,000	200,000	270,000	-	-	-	-	910,000

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	10,000	5,000	-	-	-	-

Explanation of impact: The completion of this project added $5,000 in FY 2012, and will add $10,000 in FY 2013 and an additional $5,000 in FY 2014 operating budgets to fund system maintenance contracts.

Schedule: Prior years work to be completed — Construct initial Priority 1 SCADA improvements. FY 2013 — Construct remaining Priority 1 SCADA improvements. FY 2014 — Design and construct Priority 2 and Priority 3 SCADA Improvements.

Status: Implementation. This project first appeared in the FY 2009 CIP. Implementation contract awarded in March 2010, priority 1 projects are expected to be implemented in Summer 2012.

Coordination: Hydraulic Surge Suppression project (210-850-9C34); Water Plant Upgrades project (210-850-4A40); Water System Facility Improvements project (210-850-1C34); Water Tank Improvements project (210-850-7A34); Southlawn Lane Water Main project (210-850-3E45).

Staff Contact: Department of Public Works. Jim Woods, Civil Engineer II, 240-314-8513.

Project Name: Sewer Rehabilitation
Project Number: 220-850-9G34
Program Area: Utilities

Prior Appropriations:	5,001,150
Add New Appropriations:	1,179,000
Add Future Appropriations:	4,999,000
Current Project Total:	11,179,150
Add Unfunded:	250,000
Current Project Total with Unfunded:	11,429,150

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	5,001,150
Less Expended:	3,113,438
Prior Year Funds Carried Over:	1,887,712
Add New Appropriations:	1,179,000
Total FY 2013 Appropriations:	3,066,712
Percent Expended:	28%

Project Snapshot

Original Project Total w/Unfunded:	N/A
Current Project Total w/Unfunded:	11,429,150
Percent Change:	N/A
Percent Completed:	N/A
Est. Completion Year:	On-going

Description: This sustainable project funds the design, construction, inspection and equipment needed for sewer system replacements or rehabilitation identified through the comprehensive closed circuit television (CCTV) Preventive Maintenance Program (PMP). At least once every 10 years, City staff, supplemented by a contractor, use CCTV to perform condition assessments of the pipes and manholes to determine the priority and type of rehabilitation needed. Typical rehabilitation consists of cleaning and subsequent lining of the sewers with a cured-in-place liner. If the sewer is severely degraded, it is excavated and replaced (dig and replace). Additionally, point repairs to main lines and house connections and/or various manhole rehabilitation methods may be used. This project also funds the replacement of sanitary sewers to provide adequate transmission capacity for future expansion, as well as the relocation of sanitary sewers on private property into City rights-of-way or City-maintained utility easements, when needed, as part of a sewer replacement project. The priority of proposed projects may be revised depending on future inspections or due to sewer rehabilitation needs in conjunction with stream restoration projects.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	425,000	162,000	89,000	136,000	-	-	on-going	812,000
Construction	4,576,150	1,017,000	1,054,000	1,229,000	1,241,000	1,250,000	on-going	10,367,150
Total	5,001,150	1,179,000	1,143,000	1,365,000	1,241,000	1,250,000	on-going	11,179,150

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Sewer Fund	2,090,112	1,179,000	1,143,000	1,365,000	1,241,000	1,250,000	on-going	8,268,112
Bond Proceeds (Sewer)	2,007,500	-	-	-	-	-	-	2,007,500
Federal Grant (Sewer)	903,538	-	-	-	-	-	-	903,538
Total	5,001,150	1,179,000	1,143,000	1,365,000	1,241,000	1,250,000	on-going	11,179,150

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	250,000	-	-	-	-	-	250,000

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Sewer Fund	-	-	-	-	-	-

Explanation of impact: This project will have no measurable impact on the operating budget.

Schedule: Prior years work to be completed — Design S. Van Buren St. improvements; construct two locations on Grandin Ave.; rehab. sewers identified by PMP. FY 2013 — Construct S. Van Buren St. and Rockville Pike improvements; rehab. sewers identified by PMP. FY 2014 — Design and construct Williams St. and Crawford Dr. improvements; rehab. sewers identified by PMP. FY 2015 — Design and construct E. Jefferson St. improvements; rehab. sewers identified by PMP. FY 2016 and beyond — Rehab. sewers as identified by PMP, at an approximate rate of 1.3 miles per year for sewer lining.

Status: Implementation. This project first appeared in FY 2009. *Funding Note:* The City received a $727,000 EPA Grant in FY 2011. Staff anticipates receiving a $250,000 developer contribution (Upper Rock) in FY 2013 (currently unfunded).

Coordination: Neighborhood Civic Associations and Adjacent Landowners; Neighborhood Resource staff; Glenora Tributary-Middle project (330-850-9C59) and Watts Branch-Upper Stream project (330-850-2E59) in the Stormwater Program Area; Asphalt Repair and Replacement project (420-850-0A11) in the Transportation Program Area.

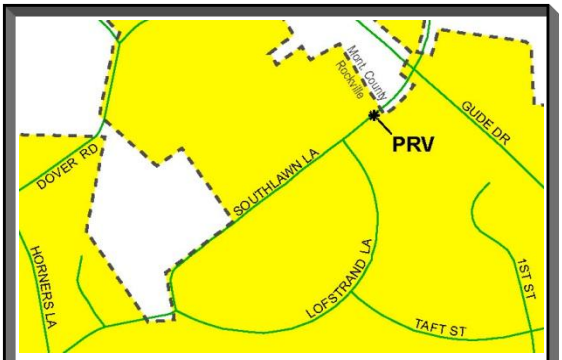
Staff Contact: Department of Public Works. Jim Woods, Civil Engineer II, 240-314-8521.

Project Name:	Southlawn Lane Water Main
Project Number:	210-850-3E45
Program Area:	Utilities

Prior Appropriations:	682,000
Add New Appropriations:	-
Add Future Appropriations:	-
Current Project Total:	682,000
Add Unfunded:	-
Current Project Total with Unfunded:	682,000

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	682,000
Less Expended:	466,826
Prior Year Funds Carried Over:	215,174
Add New Appropriations:	-
Total FY 2013 Appropriations:	215,174
Percent Expended:	68%



Project Snapshot

Original Project Total w/Unfunded:	397,800
Current Project Total w/Unfunded:	682,000
Percent Change:	71%
Percent Completed:	80%
Est. Completion Year:	FY 2013

Description: This project funds the extension of the public water system in the Southlawn industrial community. The *2008 Water Distribution Master Plan* recommended connecting two dead-end water lines on Southlawn Lane with approximately 1,100 linear feet of 12-inch water line and installation of a pressure reducing valve (PRV) and associated vaults, piping and SCADA improvements at the connection with the Washington Sanitary Sewer Commission (WSSC) water system. This will improve overall system pressure, fire flows and water quality in the water distribution system.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	155,000	-	-	-	-	-	-	155,000
Construction	527,000	-	-	-	-	-	-	527,000
Total	682,000	-	-	-	-	-	-	682,000

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	682,000	-	-	-	-	-	-	682,000
Total	682,000	-	-	-	-	-	-	682,000

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	-	500	-	-	-	-

Explanation of impact: This project added $400 in FY 2012 for water main maintenance costs and will add an additional $500 to the FY 2014 operating budget to fund pressure reducing valve maintenance costs.

Schedule: Prior years work to be completed — Design and construct a pressure reducing valve.

Status: Construction of the water main is complete. Construction award of the PRV is planned for Winter 2012 and construction completion is planned for Spring 2013. This project first appeared in the FY 2003 CIP.

Coordination: Adjacent Landowners; WSSC; SCADA Improvement project (210/220-850-9D34); Southlawn Lane project (420-850-6A11) and Asphalt Repair and Replacement project (420-850-0A11) in the Transportation Program Area; Storm Drain Rehab & Improvements project (330-850-0A59) in the Stormwater Management Program Area.

Staff contact: Department of Public Works. Ilene Lish, Civil Engineer II, 240-314-8516.

Project Name: Water Main Rehabilitation
Project Number: 210-850-5C34
Program Area: Utilities

Prior Appropriations:	14,667,085
Add New Appropriations:	4,399,000
Add Future Appropriations:	10,918,534
Current Project Total:	29,984,619
Add Unfunded:	-
Current Project Total with Unfunded:	29,984,619

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	14,667,085
Less Expended:	13,484,474
Prior Year Funds Carried Over:	1,182,611
Add New Appropriations:	4,399,000
Total FY 2013 Appropriations:	5,581,611
Percent Expended:	45%

Project Snapshot
Original Project Total w/Unfunded: N/A
Current Project Total w/Unfunded: 29,984,619
Percent Change: N/A
Percent Completed: N/A
Est. Completion Year: On-going

Description: This sustainable project funds the planning, design and construction of water system improvements annually as part of the plan to upgrade the aging City water system. Upgrades will maintain the vital life-supporting resource of water, provide a more reliable water system and ensure safe drinking water compliant with Federal and State regulations. Improvement projects include inspection and assessment of the 24-inch PCCP transmission main; rehabilitating existing pipe; installing new mains to replace older pipes and pipes made of spiral-welded steel (prone to leaks); water vaults and appurtenance, increasing the diameter of undersized pipes; connecting dead-end pipe segments; and replacing pipes, which have a history of frequent water main breaks. The goals are to: increase fire flows, especially in fire hydrants providing less than 500 gallons-per-minute; improve water quality; upgrade aging infrastructure; reduce frequency of water main breaks; and replace pipes with excessive tuberculation. Starting in FY 2015, this project will fund water system improvements at an average 1.7 miles per year consistent with the originally approved 20-year, 34 mile schedule.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	2,152,800	553,080	189,322	138,700	142,861	147,147	on-going	3,323,910
Construction	12,514,285	3,845,920	3,155,363	2,311,670	2,381,020	2,452,451	on-going	26,660,709
Total	14,667,085	4,399,000	3,344,685	2,450,370	2,523,881	2,599,598	on-going	29,984,619

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	1,776,785	2,199,500	1,672,343	1,225,185	1,261,941	1,299,799	on-going	9,435,552
Bond Proceeds (Water)	12,768,800	2,199,500	1,672,343	1,225,185	1,261,941	1,299,799	on-going	20,427,567
Developer	121,500	-	-	-	-	-	-	121,500
Total	14,667,085	4,399,000	3,344,685	2,450,370	2,523,881	2,599,598	on-going	29,984,619

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	-	-	-	-	-	-

Explanation of impact: This project will have no measurable impact on the budget.

Schedule: Prior years work and FY 2013 — Pipe upgrades in Montrose, Twinbrook and Wood Lane; replace water meter vault at 1251 W. Montgomery Ave. FY 2014 — Pipe upgrades in Lincoln Park, East Rockville and Twinbrook. FY 2015 — Pipe upgrades in Hungerford, East Rockville and Twinbrook. FY 2016 — Pipe upgrades in East Rockville, Lincoln Park and Montrose. FY 2017 — Pipe upgrades in Twinbrook and East Rockville. Future Years — Pipe upgrade locations to be determined.

Status: Implementation. This project first appeared in the FY 2005 CIP.

Coordination: Neighborhood Civic Associations and Adjacent Landowners; Neighborhood Resource Division; Montgomery County Fire and Rescue Service; Asphalt Repair and Replacement project (420-850-0A11) and Bridge Rehabilitation project (380/420-850-8L11) in the Transportation Program Area.

Staff contact: Department of Public Works. John W. Hollida, Civil Engineer III, 240-314-8526.

Project Name: Water Plant Upgrades
Project Number: 210-850-4A40
Program Area: Utilities

Prior Appropriations:	4,140,500
Add New Appropriations:	-
Add Future Appropriations:	-
Current Project Total:	4,140,500
Add Unfunded:	-
Current Project Total with Unfunded:	4,140,500

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	4,140,500
Less Expended:	1,457,149
Prior Year Funds Carried Over:	2,683,351
Add New Appropriations:	-
Total FY 2013 Appropriations:	2,683,351
Percent Expended:	35%

Project Snapshot

Original Project Total w/Unfunded:	300,000
Current Project Total w/Unfunded:	4,140,500
Percent Change:	1,280%
Percent Completed:	60%
Est. Completion Year:	FY 2014

Description: This project funds the analysis, study, design and construction of a new 57-ft diameter gravity thickener. The new thickener will expand the Water Treatment Plant's capacity to better manage the solids and recycled water flows during optimized plant system operations for removal of organics and other Disinfection Byproduct precursors.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Current Total
Plan/Design/Insp	1,804,500	-	-	-	-	-	-	1,804,500
Construction	2,336,000	-	-	-	-	-	-	2,336,000
Total	4,140,500	-	-	-	-	-	-	4,140,500

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Current Total
Water Fund	255,500	-	-	-	-	-	-	255,500
Bond Proceeds (Water)	3,885,000	-	-	-	-	-	-	3,885,000
Total	4,140,500	-	-	-	-	-	-	4,140,500

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	-	15,000	-	-	-	-

Explanation of impact: This project added $10,000 to the FY 2011 and will add $15,000 to the FY 2014 operating budgets for chemicals, electricity and maintenance.

Schedule: Prior years work to be completed — Construct solids handling (57-ft diameter thickener) improvements.

Status: Implementation. Construction award is planned for Summer 2012 and construction completion is planned for Summer 2013. This project first appeared in the FY 2004 CIP. Full scale coagulant testing for plant implementation is complete; optimized plant improvements will be implemented in Water System Facility Improvements (210-850-1C34).

Coordination: MDE; Water System Facility Improvements (210-850-1C34).

Staff contact: Department of Public Works. Dan Kane, Civil Engineer II, 240-314-8523.

Project Name: Water System Facility Improvements
Project Number: 210-850-1C34
Program Area: Utilities

Prior Appropriations:	1,229,000
Add New Appropriations:	1,260,000
Add Future Appropriations:	-
Current Project Total:	2,489,000
Add Unfunded:	-
Current Project Total with Unfunded:	2,489,000

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	1,229,000
Less Expended:	12,789
Prior Year Funds Carried Over:	1,216,211
Add New Appropriations:	1,260,000
Total FY 2013 Appropriations:	2,476,211
Percent Expended:	1%

Project Snapshot

Original Project Total w/Unfunded:	28,625,000
Current Project Total w/Unfunded:	2,489,000
Percent Change:	-91%
Percent Completed:	2%
Est. Completion Year:	FY 2014

Description: This project funds a phased study, design and construction of water system improvements to improve water quality, increase production capacity and rehabilitate/replace aging components, that are at the end of their life cycle. The air scour system replaces the nonfunctional surface wash system and will improve the treatment and operational effectiveness of the filters. These improvements will comply with environmental regulations from the Environmental Protection Agency (EPA) and the Maryland Department of the Environment (MDE). Optimization of the existing water treatment, storage and distribution systems will be needed to meet the new EPA Stage 2 Disinfection Byproducts Rule (DBPR). The 2011 *Water Quality Study* presents a detailed alternatives analysis to identify the most cost-effective means of maintaining regulatory compliance, while looking to increase system capacity to meet future demands. Key projects from this study are to use Ferric Chloride (FeCl), a more effective coagulant, and the potential need to use enhanced filtration through the use of Granulated Activated Carbon (GAC) to ensure EPA Stage 2 DBPR compliance.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	600,000	60,000	-	-	-	-	-	660,000
Construction	629,000	1,200,000	-	-	-	-	-	1,829,000
Total	1,229,000	1,260,000	-	-	-	-	-	2,489,000

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	600,000	-	-	-	-	-	-	600,000
Bond Proceeds (Water)	629,000	1,260,000	-	-	-	-	-	1,889,000
Total	1,229,000	1,260,000	-	-	-	-	-	2,489,000

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	-	120,000	-	-	-	-

Explanation of impact: This project will add $120,000 to the FY 2014 operating budget to fund additional operating costs for chemicals and electricity for the change of coagulant to FeCl.

Schedule: Prior years work to be completed — Complete air scour for filters and design FeCl enhanced coagulation changes at the Water Treatment Plant to comply with Stage 2 DBPR. FY 2013 — Construct FeCl improvements at the Water Treatment Plant.

Status: Implementation. The air scour constuction award is planned for Summer 2012 and construction completion is planned for Summer 2013. This project first appeared in the FY 2011 CIP. Based on the *Water Quality Study* staff will continue to monitor the level of DBPs within the distribution system to confirm that a GAC upgrade, which would cost $8.4 million to design and construct, will not be required.

Coordination: Washington Suburban Sanitary Commission; MDE; Water Plant Upgrades (210-850-4A40); Water Tank Improvements (210-850-7A34).

Staff contact: Department of Public Works. Ilene Lish, Civil Engineer II, 240-314-8516.

Project Name: Water Tank Improvements
Project Number: 210-850-7A34
Program Area: Utilities

Prior Appropriations:	740,888
Add New Appropriations:	1,621,000
Add Future Appropriations:	3,248,000
Current Project Total:	5,609,888
Add Unfunded:	-
Current Project Total with Unfunded:	5,609,888

Status of Prior Year Appropriations as of 05/01/12:

Prior Year Appropriations:	740,888
Less Expended:	368,052
Prior Year Funds Carried Over:	372,836
Add New Appropriations:	1,621,000
Total FY 2013 Appropriations:	1,993,836
Percent Expended:	7%

Project Snapshot

Original Project Total w/Unfunded:	2,850,000
Current Project Total w/Unfunded:	5,609,888
Percent Change:	97%
Percent Completed:	3%
Est. Completion Year:	FY 2016

Description: This project funds the design, inspection and rehabilitation of two water tanks, Hunting Hill and Carr Avenue, and decommissioning Talbott Tank. Associated water system improvements and taking Talbott Tank out of service are mission critical strategies created to ensure safe drinking water compliance with Federal and State regulations. Talbott Tank is contributing poor water quality in the distribution system due to hydraulic limitations. Rehabilitating the two tanks will consist of new coatings (inside and outside) as well as minor structural repairs. These two tanks are not recommended for replacement for two reasons: the inspections indicated they are structurally sound; and replacing the tanks would provide minimal water quality improvements. The water system improvements, which support taking Talbott Tank off-line, include the creation of a smaller new pressure zone, new pressure-reducing valves and miscellaneous water main upgrades. The improvements in this project are recommended in the 2011 Tank Inspection Report, the 2011 Water Quality Study and the 2012 Twinbrook Rezoning Report.

Appropriation Schedule	Prior Approps	New Approps	Future Appropriation Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Plan/Design/Insp	81,000	148,000	148,000	149,000	-	-	-	526,000
Construction	659,888	1,473,000	-	2,951,000	-	-	-	5,083,888
Total	740,888	1,621,000	148,000	3,100,000	-	-	-	5,609,888

Funding Schedule	Prior Funding	New Funding	Future Funding Schedule					Current Total
			FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	
Water Fund	740,888	1,621,000	148,000	-	-	-	-	2,509,888
Bond Proceeds (Water)	-	-	-	3,100,000	-	-	-	3,100,000
Total	740,888	1,621,000	148,000	3,100,000	-	-	-	5,609,888

Unfunded Schedule	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs	Total
Unfunded	-	-	-	-	-	-	-

Operating Cost Impact	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Future Yrs
Water Fund	-	5,000	-	-	-	-

Explanation of impact: The completion of the aeration and mixing system at Hunting Hill Tank will add $5,000 to the FY 2014 operating budget to fund pump maintenance.

Schedule: Prior years work to be completed — Hunting Hill aeration and mixing system. FY 2013 — Design and construct pressure-reducing valves and vaults and miscellaneous pipe upgrades to support Talbott Tank being taken out of service. FY 2014 — Design of Hunting Hill and Carr Avenue Tank rehabilitation. FY 2015 — Construct tank repairs.

Status: Construction. This project first appeared in the FY 2007 CIP. An aeration and mixing system is being installed at Hunting Hill. The tank inspections are complete and repairs are included in this CIP.

Coordination: Neighborhood Civic Associations and Adjacent Landowners; Maryland Department of the Environment; Water System Facility Improvements project (210-850-1C34); SCADA Improvements (210/220-850-9D34).

Staff contact: Department of Public Works. Ilene Lish, Civil Engineer II, 240-314-8516.